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EXAMINER

JACKSON, MONIQUE R.

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 06/03/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/466,724

Applicant(s)

WATANABE ET AL.

Examiner

Monique R Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 10-27 is/are pending in the application.
- 4a) Of the above claim(s) 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### **DETAILED ACTION**

1. The amendment filed 3/11/02 has been entered. Claims 1-9 have been canceled. New claims 10-27 have been added. Claims 10-27 are pending in the application.
2. Newly submitted claim 27 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 27 is directed to a method for manufacturing a coated metal plate which comprises adhering or pressing a preformed conductive plastic film or sheet on a surface of a metal plate and then electrodepositing an electrodeposition paint on the plastic film or sheet to form an electrodeposition film classified in class 156, subclass 150, while original cancelled claims 1-9 and corresponding newly submitted claims 10-26 are directed to a coated metal plate classified in class 428, subclass 458.
3. Hence, restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 10-26 corresponding to cancelled claims 1-9, drawn to a coated metal plate, classified in class 428, subclass 458.
  - II. Claim 27, drawn to a method of manufacturing a coated metal plate, classified in class 156, subclass 150.

The inventions are distinct, each from the other because of the following reasons:

4. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the coated metal plate product can be made by a materially different process such as direct coating of

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a conductive plastic layer by applying a conductive plastic coating composition onto the surface of the metal plate.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 27 has been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

7. Claims 10-11, 13, 15, 17 and 19-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Luch (USPN 4,101,385.) Luch teaches a process for making a metal plastic structure for use in automobiles such as for use as automobile bumpers utilizing a highly advantageous platable plastic composition comprising in percent by weight about 62% polymer, about 33% carbon black (*an inherently conductive substance*), about 0.7% elemental sulfur, about 0.7% mercaptobenzothiazyl disulfide and about 3% zinc oxide (*inherently conductive*) or other platable plastic composition known in the art, that is melt blended, then sheeted to form sheets having thicknesses in the range of about 100 to 2000 microns, and the thus formed platable plastic sheet is then mechanically applied under heat and pressure with or without a cement (*adhesive*) to a roughened, formed aluminum or aluminum alloy surface in such a fashion

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that the resultant aluminum-platable plastic is mechanically locked together (*as in instant claims 10-11, 13, 15, 21-26*, Abstract; Col. 1, lines 5-42; Col. 1, line 64-Col. 2, line 9.) Luch also teaches that the platable (*conductive*) plastic surface is then plated with electrodeposited paint wherein the platable article acts as a cathode in a plating bath such as in a nickel plating bath in such fashion that voltage is gradually increased until the whole plastic surface is covered with electrodeposited nickel that may further be covered by an electrodeposited layer of chromium or copper or nickel alloys wherein Luch specifically teach an example with a nickel electrodeposited layer of 3 microns followed by a copper electrodeposited layer of about 10 microns and further teaches that the platable composite can be plated according to known methods (*as in instant claims 15, 17 and 19-20*; Col. 1, lines 45-48; Col. 2, lines 10-23; Example.)

8. Claims 10, 15, and 22-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Lo (USPN 4,745,012.) Lo teaches a process for producing an electrocoated multi-material workpiece such as an automobile body comprising the steps of first precoating a non-conductive, polymeric component or substrate with an electroconductive primer which is conductive when cured into a film thereby rendering the surface of the polymeric component sufficiently conductive for electrocoating, assembling the primed polymeric components with the conductive metallic components to form the multi-material workpiece, such as an automobile chassis 10, and then submerging the formed workpiece in an electrocoat bath 20 containing an electrocoating material 22 of the type and utilizing electrocoat techniques known to those skilled in the electrocoat arts to form an electrocoated multi-material workpiece; wherein in automotive embodiments, the polymeric component may comprise bumper components such as the rear or

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front bumper or bumper facia, automobile interior trim work, spoilers, fenders, door panels, or steering column components (Abstract; Figure 1, Col. 1, lines 9-50; Col. 1, line 61-Col. 2, line 15; Col. 3, lines 6-44; Col. 3, line 60-Col. 4, line 39.) Lo further teaches throughout the document that the conductivity of the primer directly affects the electrocoating properties of the non-conductive polymeric components wherein sufficient conductivity is required to provide the desired electrical properties for the electrocoating process and specifically teaches examples having a specific resistance within the instantly claimed range (Col. 5, lines 11-34; Examples.)

***Claim Rejections - 35 USC § 103***

9. Claims 11, 12, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luch. The teachings of Luch are discussed above. Luch does not specifically teach that the platable plastic film has a thickness in the range of 1 to 100µm or 3 to 75µm, or that the electrodeposited paint film has a thickness of about 10 to about 40µm or about 10 to about 20µm, however given that thickness is a known result-effective variable affecting the mechanical properties of the resulting composite, it would have been obvious to one having ordinary skill in the art to utilize routine experimentation to determine the optimum thickness of the plastic film as well as the protective plating layer to provide the desired mechanical properties of the composite material taught by Luch for a particular end use.

10. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luch '385 in view of Luch (USPN 3,865,699) or Luch (USPN 4,009,093). The teachings of Luch '385 are discussed above and include the use of platable plastic compositions as taught in Luch '699 or Luch '093 (Col. 1, lines 34-37.) Though Luch '385 does not specifically teach the volume specific resistance or the surface resistance of the platable plastic compositions, it is well

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known in the art that conductivity or electrical resistance, measured as volume specific or surface resistance, are known result-effective variables in terms of an electrodeposition process as taught by Luch '385 wherein Luch '699 (Col. 2, lines 22-35; Col. 4, line 16-Col. 5, line 13) and Luch '093 (Col. 2, lines 23-36; Col. 4, line 14-Col. 5, line 11) teach that the plastic composition preferably has a volume resistivity of less than 1000 ohm-cm in order to provide the desired electrical properties for electroplating wherein the plated object may be subjected to further electrodeposition in ways well known to those skilled in the art. Hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a platable plastic composition having a volume specific resistivity of less than 1000 or  $10^3$  as taught by Luch '699 or Luch '093 for the invention taught by Luch '385 or to utilize routine experimentation to determine the optimum conductivity or resistivity as measured as volume specific resistance and/or surface resistance, to provide the desired electrical properties for the electrodeposition process taught by Luch '385.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Luch '385 in view of the admitted prior art or Midoguhchi et al (USPN 5,483,012) or Horibe et al (6,231,984). The teachings of Luch '385 are discussed above. Though Luch teaches that the platable plastic-metal composite is further coated with an electrodeposited decorative plating layer, Luch does not teach utilizing an electrodeposition paint as in instant claim 18. However, the admitted prior art at Page 9, line 18-Page 10, line 12, teach that electrodeposition paints as in claim 18 are known in the art wherein Midogohchi et al, cited at Page 9, line 23 of the instant disclosure, specifically teach the use of a cationic electrodepositable coating composition as instantly claimed to provide improved chip resistance and corrosion resistance to steel automotive panels

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wherein the thickness of the cationic electrodepositable coating composition is not specifically limited and is in the range of 10 to 50 $\mu$ m, preferably 15 to 35 $\mu$ m (Abstract; Col. 2, lines 47-53; Col. 4, lines 18-28; Col. 7, lines 9-54; Col. 8, lines 1-4.) Horibe et al also teach the use of a cationic electrodeposited coating film as instantly claimed as a corrosion resistant component of a multilayer coating film on an automotive part or body such as a fender wherein the coating layer thickness is preferably 10-40 $\mu$ m, particularly 15-30 $\mu$ m (Abstract; Col. 1, line 66-Col. 3, line 63.) Hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any cationic electrodepositable coating composition conventionally utilized for coating automotive parts wherein a cationic electrodeposited paint containing a base resin having a hydroxyl group and an amino group which can be converted to a cation with an aliphatic block polyisocyanate compound is taught by Midogohchi et al or Horibe et al to provide improved chip resistance and/or corrosion resistance to the metal automotive substrate taught by Luch '385.

12. Claims 11, 12, 14, 16, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lo in further view of Luch '699, Luch '093, or Palaika et al. The teachings of Lo are discussed above. Lo does not teach that the thickness of the plastic components or substrates or the thickness of the electrodeposited paint film as instantly claimed, however, given that thickness is a known result-effective variable affecting the mechanical properties of the resulting composite, it would have been obvious to one having ordinary skill in the art to utilize routine experimentation to determine the optimum thickness of the plastic film as well as the protective plating layer to provide the desired mechanical properties of the composite material taught by Lo for a particular end use. Further, Lo does not specifically teach the volume specific

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resistance or the surface resistance ranges as instantly claimed, however Lo does teach that conductivity or electrical resistance is a result-effective variable in terms of an electrocoating process which is further evidenced by Luch '699 or Luch '093 or Palaika et al, all of which specifically teach resistance range values as instantly claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize routine experimentation to determine the optimum conductivity or electrical resistance to provide the desired electrical properties for electrocoating of the invention taught by Lo.

13. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lo in view of the admitted prior art or Midoguhchi et al (USPN 5,483,012) or Horibe et al (6,231,984). The teachings of Lo are discussed above. Though Lo teaches that the electrocoated workpiece can be producing using an electrocoating material 22 of the type and utilizing electrocoat techniques known to those skilled in the electrocoat arts to form the electrocoated multi-material workpiece, Lo does not specifically teach that the electrocoating material is a cationic electrocoating material, however, a cationic electrocoating material or paint is a known, conventional and obvious species of electrocoating materials or paints utilized in the automotive industry as evidenced by the admitted prior art or Midoguhchi et al or Horibe et al and would have been obvious to one having ordinary skill in the art at the time of the invention based on the teachings of Lo. Further, the admitted prior art at Page 9, line 18-Page 10, line 12, teach that electrodeposition paints as in claim 18 are known in the art wherein Midogohchi et al, cited at Page 9, line 23 of the instant disclosure, specifically teach the use of a cationic electrodepositable coating composition as instantly claimed to provide improved chip resistance and corrosion resistance to steel automotive panels wherein the thickness of the cationic electrodepositable

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coating composition is not specifically limited and is in the range of 10 to 50 $\mu$ m, preferably 15 to 35 $\mu$ m (Abstract; Col. 2, lines 47-53; Col. 4, lines 18-28; Col. 7, lines 9-54; Col. 8, lines 1-4.)

Horibe et al also teach the use of a cationic electrodeposited coating film as instantly claimed as a corrosion resistant component of a multilayer coating film on an automotive part or body such as a fender wherein the coating layer thickness is preferably 10-40 $\mu$ m, particularly 15-30 $\mu$ m (Abstract; Col. 1, line 66-Col. 3, line 63.) Hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any cationic electrodepositable coating composition conventionally utilized for coating automotive parts wherein a cationic electrodeposited paint containing a base resin having a hydroxyl group and an amino group which can be converted to a cation with an aliphatic block polyisocyanate compound is taught by Midogohchi et al or Horibe et al to provide improved chip resistance and/or corrosion resistance to the metal automotive workpiece taught Lo.

14. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lo in view of Luch '385. The teachings of Lo are discussed above. Though Lo teaches that the non-conductive polymeric components or substrates, such as bumper facia or components, are first precoated with a conductive primer and then assembled with the conductive metallic components to form the multi-material workpiece, such as an automobile body, Lo does not teach that the primed polymeric components are adhered to the metallic components using an adhesive. However, the use of an adhesive to provide a more secure and permanent bond between assembled components is conventional and well known in the art and would have been obvious to one having ordinary skill in the art at the time of the invention. Further, Luch '385 teaches a multi-material component such as an automobile bumper comprising a polymeric component and

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a metal component wherein Luch '385 specifically teaches that the two materials are mechanically attached to one another with or without a cement to form the automotive bumper.

***Response to Arguments***

15. Applicant's arguments filed 3/11/02 have been considered but are moot in view of the new ground(s) of rejection.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



mrj  
May 30, 2002



Paul Thibodeau  
Supervisory Patent Examiner  
Technology Center 1700